

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 09/904,566

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. Upon entry of this Amendment, claims 1-14 are pending in the application. In response to the July 28, 2005 Office Action, Applicant respectfully submits that the pending claims define patentable subject matter.

The Examiner indicates that the July 28 Office Action is made final because the May 16, 2005 Amendment necessitated the new grounds of rejection in the Office Action. However, the amendment to independent claim 1 did not necessitate the new grounds of rejection since the amendment to claim 1 was merely grammatical/stylistic in nature and did not change the scope of the claim. As set forth in MPEP 706.07(a), “second or any subsequent actions on the merits shall final, except where the examiner introduces a new grounds of rejection that is neither necessitated by applicant’s amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 C.F.R. § 1.97(c) with the fee set forth in 37 C.F.R. § 1.17(p).” **Accordingly, Applicant respectfully submits the finality of the July 28 Office Action is improper and requests that the Examiner withdraw the finality of the July 28 Office Action.**

Claims 10-11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because the claim 10 refers to “step (d)” while base claim 8 does not recite a “step (d)”. By this Amendment, Applicant has amended claim 10 to be dependent on claim 9. Accordingly, the Examiner is requested to withdraw the § 112, second paragraph, rejection.

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Claims 1-2, 7-9 and 14 are rejected under 35 U.S.C. § 102(a) as being anticipated by Ying (U.S. Patent No. 6,061,600). Claims 1-2 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over newly cited van der Tuijn et al. (U.S. Patent No. 6,683,886; hereafter “van der Tuijn”) in view of Ying. Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying and Erekson et al. (U.S. Patent No. 6,836,862; hereafter “Erekson”). Claims 4-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying, Erekson and “Official Notice”. Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying and “Official Notice”. Claims 8-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ying in view of van der Tuijn. Claims 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ying in view of van der Tuijn, Akyol et al. (U.S. Patent No. 6,701,448; hereafter “Akyol”) and “Official Notice”. Applicant respectfully traverses the prior art rejections.

§ 102 Rejection based on Ying

With regard to the § 102 rejection of claims 1, 2, 7-9 and 14 based on Ying, Applicant notes that the Examiner did not provide any response to the arguments for patentability with regard to claims 1, 2 and 7-9 in the May 15 Amendment. In particular, the Examiner only responded to arguments for patentability with regard to claim 14 on page 14 of the Office Action.

Independent claim 1 is directed to “[a] method for building up backup master information.” Claim 1 recites:

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(a) receiving connection information from at least one of a plurality of slaves in a network;

(b) determining a priority of said at least one of the plurality of slaves to be used as a backup master, when a network master disappears, according to the received connection information; and

(c) announcing the determined priority to at least another one of the plurality of slaves.

Applicant respectfully submits that claim 1 would not have been anticipated by Ying.

With regard to step (b), the Examiner (in the February 16, 2005 Office Action) cited various portions of Ying including col. 2, lines 44-54; col. 7, lines 35-49; col. 10, lines 50-67; and col. 11, lines 1-30 and 51-58 in support of the rejection. However, nowhere do the cited portions of Ying teach or suggest determining a priority of at least one of the plurality of slaves to be used as a backup master, when a network master disappears, according to the connection information received from the at least one of the plurality of slaves. Instead, Ying simply discloses that each of the slave nodes is pre-programmed to detect a failure mode condition after a different amount of time than the other slave nodes are programmed with such that the first slave node slave node which is pre-programmed with the shortest failure mode detection time becomes the substitute master node upon detection a failure mode condition. That is, the programmed amount time that a slave node waits to receive control messages from the master node before taking over for the master node is not determined based on connection information received from a slave node.

With regard to step (c), the Examiner (in the February 16, 2005 Office Action) cited col. 2, lines 44-58 and col. 11, lines 24-35 of Ying in support of the rejection. However, nowhere do

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the cited portions of Ying disclose announcing the determined priority to at least another one of the plurality of slaves. Instead, the slaves are simply programmed to detect a failure mode condition after different amounts of time. That is, programming a time interval does not inform a slave of a determined priority of another slave.

Accordingly, claims 1, 2 and 7 should be allowable over Ying since the cited reference does not teach or suggest all of the features of the claimed invention.

Independent claim 8 is directed to “[a] method for designating a new master of a network when a preexisting network master disappears.” Claim 8 recites:

- (a) determining at a slave whether the preexisting network master has disappeared;
- (b) if the preexisting network master has disappeared, checking a rank assigned to the slave based on connection information received from the slave, wherein the rank is used for choosing a new network master and is received before the disappearance of the preexisting network master; and
- (c) changing the slave to the new network master if it determined that the rank is highest of any one assigned to a plurality of slaves.

Applicant respectfully submits that claim 8 would not have been anticipated by Ying. In particular, Applicant submits that it is quite clear that Ying does not teach or suggest claimed steps (b) or (c).

With regard to step (b), the Examiner (in the February 16, 2005 Office Action) cited various portions of Ying including col. 2, lines 44-54; col. 7, lines 35-49; col. 10, lines 50-67; and col. 11, lines 1-30 and 51-58 in support of the rejection. However, nowhere do the cited

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portions of Ying teach or suggest checking a rank assigned to the slave based on connection information received from the slave, wherein the rank is used for choosing a new network master and is received before the disappearance of the preexisting network master. Instead, as discussed above, Ying simply discloses that each of the slave nodes is pre-programmed to detect a failure mode condition after a different amount of time than the other slave nodes are programmed with such that the first slave node slave node which is pre-programmed with the shortest failure mode detection time becomes the substitute master node upon detection a failure mode condition. That is, the programmed amount time that a slave node waits to receive control messages from the master node before taking over for the master node is not a rank which is assigned to the slave node based on connection information received from the slave and is not checked if the preexisting network master has disappeared.

With regard to step (c), the Examiner (in the February 16, 2005 Office Action) cited col. 2, lines 44-58; col. 7, lines 35-49; and col. 11, lines 24-35 of Ying in support of the rejection. However, nowhere do the cited portions of Ying teach or suggest changing the slave to the new network master if is determined that the rank is highest of any one assigned to a plurality of slaves. Instead, the slaves are simply programmed to detect a failure mode condition after different amounts of time.

Accordingly, for at least the above reasons, Applicant respectfully submits that claims 8 and 9 should be allowable over Ying.

In the May 15 Amendment, Applicant argued that independent claim 14 should be allowable over Ying because the cited references does not teach or suggest the claim features of:

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- (1) checking backup master rank information, when it is determined that the preexisting network master has disappeared; and/or
- (2) attempting to establish a connection with the new network master when it is determined that one of the remaining plurality of slaves does not have a highest priority, according to the backup master rank information.

Although the Examiner did not to provide a response to our arguments regarding the second feature of claim 14 (i.e., “attempting to establish …”), the Examiner asserts that the claim feature of checking backup master when it is determined that the preexisting network master has disappeared allegedly reads on Ying’s disclosure that “[u]pon a failure to receive [a] signal from the master, the slave begin[s] its wait mode and determines that the master has failed when the wait period elapses.”¹ However, Applicant submits that the Examiner’s position is improper since Ying does not determine that the master has disappeared until the predetermined time period lapses. In particular, Ying simply discloses that when a slave node fails to receive control messages from the master node for a period exceeding its programmed failure mode detection time period, the slave node takes over for the master node.

Further, nowhere does Ying even remotely teach or suggest attempting to establish a connection with the new network master when it is determined that one of the remaining plurality of slaves does not have a highest priority, according to the backup master rank information.

¹ See Office Action at page 14, item 37.

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Accordingly, Applicant respectfully submits that claim 14 should be allowable over Ying.

§ 103 Rejections based on Ying and van der Tuijn

With regard to independent claim 1, the Examiner cites column 7m, lines 36-53 of van der Tuijn for allegedly disclosing all of the features of the claimed invention except for determining priority for at least one of a plurality of slaves to be used as a backup master when a network master disappears. However, the Examiner asserts that Ying discloses this features and that it would have been obvious to modify van der Tuijn “to provide system recovering from a failure of the master (col. 2, lines 34-43).”

Applicant notes that van der Tuijn prioritizes an order of communication of packets via different communication links based on criteria such as data transfer rates, maximum data delay, type of data, and time-out. Nowhere does van der Tuijn even mention determining a backup master priority. Further, determining priority for transmission of data is not in any manner related to determining a backup master priority. Nor has the Examiner provided any objective reason why one of ordinary skill in the art would have been motivated to modify van der Tuijn based on Ying to include this feature of the claimed invention.²

² “To support the conclusion that the claimed invention is directed to obvious subject matter, either references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the reference.” *Ex parte Clapp* 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

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Accordingly, Applicant respectfully submits that claims 1-7 should be allowable over the Examiner's proposed combination of van der Tuijn and Ying.

With regard to independent claim 8, the Examiner assert that Ying discloses all of the features of the claimed invention except for the rank assignment is based on connection information received from the slave. However, the Examiner cites col. 7, lines 36-55 of van der Tuijn for allegedly disclosing this features and asserts that it would have been obvious to modify Ying "because van der Tuijn's teaching of determining slaves priority ranking based on slaves coupling and decoupling enables Ying's method to reorder the rankings of the slaves when new slaves connect to the master."

Applicant submits that it is quite clear that neither Ying nor van der Tuijn teaches or suggests claimed steps of:

(1) if the preexisting network master has disappeared, checking a rank assigned to the slave based on connection information received from the slave, wherein the rank is used for choosing a new network master and is received before the disappearance of the preexisting network master; and/or

(2) changing the slave to the new network master if it determined that the rank is highest of any one assigned to a plurality of slaves.

Instead, Ying simply discloses that each of the slave nodes is pre-programmed to detect a failure mode condition after a different amount of time than the other slave nodes are programmed with such that the first slave node slave node which is pre-programmed with the shortest failure mode detection time becomes the substitute master node upon detection a failure

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mode condition. That is, the programmed amount time that a slave node waits to receive control messages from the master node before taking over for the master node is not a rank which is assigned to the slave node based on connection information received from the slave and is not checked if the preexisting network master has disappeared.

Lastly, van der Tuijn's determining priority for transmission of data is not in any manner related to determining a backup master priority.

Accordingly, for at least the above reasons, Applicant respectfully submits that claims 8-13 should be allowable over Ying and van der Tuijn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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